



**ENGINEERING AND RESOURCE PROTECTION REVIEW COMMENTS**  
**BUSCH GARDENS - PROJECT 2017**  
**COUNTY PLAN NO. SP – 007 – 16**  
*February 29, 2016*

**General:**

1. A local Land Disturbing/Stormwater Construction Permit (VESCP/VSMP authority permit) and Siltation Agreement, with surety, are required for this project.
2. Stormwater Inspections. It appears that this project includes stormwater conveyance and/or stormwater management facilities. Completion of a Stormwater Facilities Data Sheet and payment of Stormwater Facilities Inspection Fees may be applicable prior to issuance of a local land disturbing/stormwater construction (VESCP/VSMP authority) permit. For more information, contact the James City County Engineering and Resource Protection Division at (757) 253-6670.
3. Treasurer Certification. Please note that before accepting a local land disturbing/stormwater construction (VESCP/VSMP authority) permit application for this project, certification from the James City County Office of the Treasurer is required. County staff will verify that all real estate taxes owed for subject properties have been paid in full in accordance with Section 24-24 of the County Subdivision ordinance (Ordinance 31A-247). To check status, contact the Treasurer's office at 757-253-6705.
4. Fees. Local plan review and inspection fees are required for this project in accordance with Chapter 8, Chapter 19, Chapter 23, and Chapter 24 of County Code.
5. CCTV. As a reminder, due to local adoption of the VSMP ordinance effective July 1, 2014, an internal closed circuit television (CCTV) post installation inspection performed by the operator, is required for all stormwater conveyance system pipes, access or inlet structures, and culverts of 15-inch nominal diameter size or greater as part of the construction record drawing (asbuilt) and construction certification process. CCTV inspections shall be submitted on cd-rom or equivalent electronic file format for staff review. Refer to Sections 8-25(f) and 8-27(e) of the County's Chapter 8 ordinance.
6. Record Drawing and Construction Certification. Provide an individual boxed and bold note on the cover sheet of the application clearly indicating that all work for stormwater conveyance and stormwater management facilities is to be observed by a qualified licensed professional and that prior to the release of related posted bonds and surety, record drawings and construction certifications must be provided to, and approved by the James City County Engineering and Resource Protection Division. Record drawings and construction certifications shall be consistent with the Stormwater Management / BMP Facilities Record Drawing and Construction Certification Forms. These forms are located on the James City County web site at <http://www.jccgov.com/resourceprotection/index.html> under "Development" and under "Forms."

Should there be any questions related to the completion of this information, please feel free to contact the front desk of Engineering and Resource Protection at 253-6670.

7. VSMP/VPDES Construction. It appears land disturbing activity (disturbed area) for the project exceeds 2,500 square feet. If over one (1) acre disturbed, registration for coverage under a state VPDES construction general permit (VAR10) is required through the local VSMP Authority.
8. Plan Number. Please reference the assigned County plan number on all subsequent submissions. This number is SP-007-2016.
9. Electronic Inquiries. Following initial submission of the plan of development, any electronic email inquiries to the Engineering and Resource Protection Division (local VESCP/VSMP authority) that pertain to specific items or issues associated with the plan of development review, including design and computation related items or clarifications related to the contents of issued comments, shall be provided to Division personnel with proper subject line that contains the assigned County Plan number, name of project, and brief title identifier for the inquiry (ie. SP-01-01; ABC Development; Inlet Structure #1). Inquiries without this information may not be processed in a timely manner. In addition, electronically submitted full drawing sets in email or .pdf format that are provided to address previous comments, in advance of any formal plan resubmittal to the County, are discouraged as there are other mechanisms in place such as the County's Planning Roundtable process that are more effective and beneficial to utilize for these purposes. Again, this does not apply to a specific or specialized inquiry pertaining to item or issue associated with the plan of development review case.

**Floodplain:**

10. Floodplain. Refer to Article VI, Division 3 of Chapter 24 of the County Code for floodplain area regulations. Current FEMA FIRM maps for the County are effective December 16, 2015. Update this information on the cover sheet and sheet C-4.

**Erosion & Sediment Control Plan:**

11. Demolition and E&S Control Measures. It is suggested that future submissions provide demolition and E&S Control measures on the same sheet as both pertain to one another.
  - a. The erosion and sediment control plan for phase I on sheet C-11 does not entirely address the demolition portion showed on sheet C-7. Silt fence should be extended along the swale to be removed to avoid sediment from running downslope.
  - b. Sheet C-10, E&S Phase I, does not show any perimeter control measures, safety fence and nothing other than tree protection for the large scale demolition portion showed on sheet C-6.
12. Outlet Protection. The traditional trapezoidal riprap outlet protection shapes shown on sheet C-16 will not control runoff, especially given the angle of entry from the pipes. Modify shapes to appropriately control runoff within the aprons.
13. Temporary Slope Drains. The majority of the temporary slope drains indicated on the plans do not meet the sizing criteria of the VESCH Standard 3.15. Please revise accordingly.

14. Swale Sleeve Protection. The swale sleeve protection showed on sheet C-23 at the elbow of the swale seems short. Review the drainage flow at this point and determine if the sleeve needs to be longer.

**Stormwater Management / Drainage:**

15. Existing Pipe Information.
  - a. The existing culvert at the location labeled “ALT 3” is shown as a 12” RCP on sheet C-16 and as a 15” RCP on sheet C-24. Verify existing size and label correctly. If a 12”, indicate entire length of pipe to be replaced with appropriately sized diameter for flows.
  - b. If pipe is 12”, provide calculations showing the 12” will adequately pass the temporary slope drain arrangement, especially once the slope drains are properly sized for the drainage areas.
16. Retaining Wall Exterior Drainage. Please clarify the catch point(s) for the drainage along the exterior walls that lead under the asphalt path. See sheet C-23. Trench drains are shown within the retaining walls, but information is needed on the exterior wall drainage.